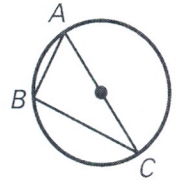


THEOREM 10.10

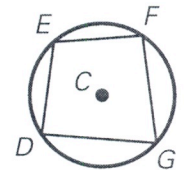
If a right triangle is inscribed in a circle, then the hypotenuse is a diameter of the circle. Conversely, if one side of an inscribed triangle is a diameter of the circle, then the triangle is a right triangle and the angle opposite the diameter is the right angle.



\angle ___ is a right angle if and only if ___ is a diameter of the circle.

THEOREM 10.11

A quadrilateral can be inscribed in a circle if and only if its opposite angles are supplementary.



$D, E, F,$ and G lie on some circle, $\odot C$, if and only if $m\angle D + m\angle F = \underline{\hspace{1cm}}^\circ$ and $m\angle E + m\angle G = \underline{\hspace{1cm}}^\circ$.

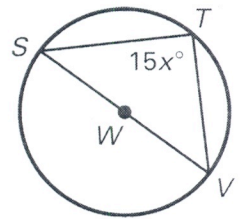
Example 3 Using Theorem 10.10

Find the value of x .

\overline{SV} is a diameter. So, $\angle T$ is a _____ and $m\angle T = \underline{\hspace{1cm}}^\circ$.

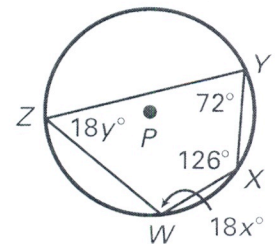
$$15x^\circ = \underline{\hspace{1cm}}^\circ$$

$$x = \underline{\hspace{1cm}}$$



✓ **Checkpoint** Complete the following exercise.

4. In the diagram, $WXYZ$ is inscribed in $\odot P$. Find the values of x and y .

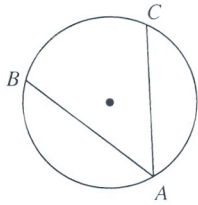


Inscribed Angles

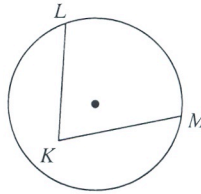
Date _____ Period _____

State if each angle is an inscribed angle. If it is, name the angle and the intercepted arc.

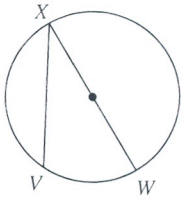
1)



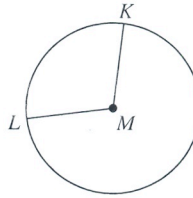
2)



3)

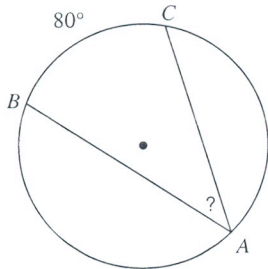


4)

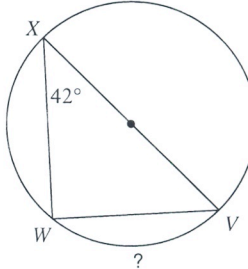


Find the measure of the arc or angle indicated.

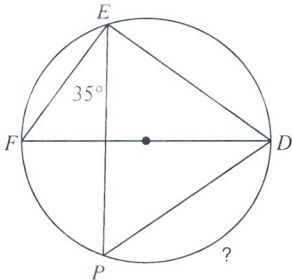
5)



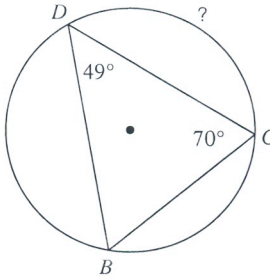
6)

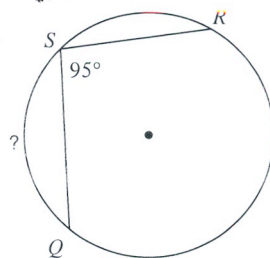
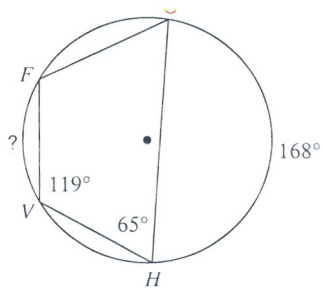


7)



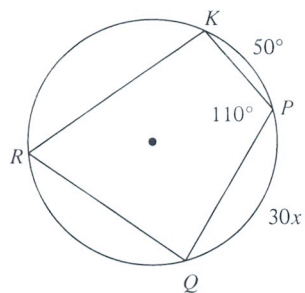
8)



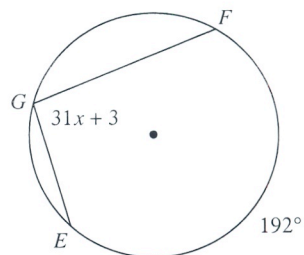


Solve for x .

11)

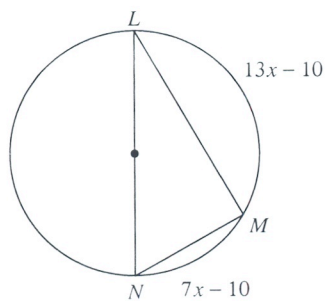


12)

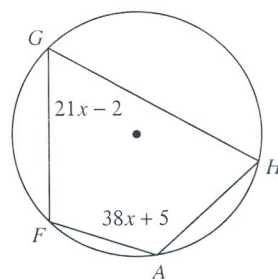


Find the measure of the arc or angle indicated.

13) Find $m\angle NLM$

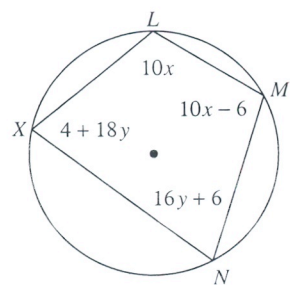


14) Find $m\widehat{FGH}$



Solve for x and y .

15)



16)

